



Changes in anthropogenic carbon dioxide across 24.5°N of the North Atlantic since 1992.

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Current models suggest that the North Atlantic is a region of high, and increasing, uptake of anthropogenic carbon dioxide. Recent studies have suggested that most of this uptake occurs towards the south and is transported into the North Atlantic basin in the upper limb of the meridional overturning circulation. To better constrain the North Atlantic carbon inventory and transport as part of the MOC, in March-April 2004, a fifth repeat transect of 24.5°N in the North Atlantic was carried out. This was the third time that carbon measurements had been obtained, in addition to previous research cruises in 1992 and 1998. Anthropogenic carbon dioxide fields are compared from the three transects, showing the penetration of the CO₂ signal, carbon transport and changes occurring over the last decade.